FIG. 3 shows moving out process along a curved path; and

FIG. 4 shows a top view of a partial region of a door with an arrangement for locking and unlocking in a second construction in the moved-out state.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

In FIGS. **1**, **2***a* and **2***b*, a door **2** with an arrangement for locking and unlocking, which is situated between walls **3**, **4**, is fitted in a container **1**. The arrangement substantially comprises two plates **5**, **6** which have, at their outwardly directed sides, locking elements **7**, **8** and **9**, **10** in the form of projections. The plates **5** and **6** which lie parallel to the walls **3**, **4** share a common drive acting in the locking and unlocking direction for displacing elements **11**, **12** in the form of connecting rods, the plates **5**, **6** being fixed in the moved-in end position and in the moved-out end position (see FIGS. **2***a* and **2***c*) by means of these displacing elements when the latter are displaced. Of the shared drive, only a rotatable disk **13** is shown in FIG. **1**. The displacing elements **11** and **12** are rotatably fitted by one end in each instance to the disk **13** so as to lie outside the axis. The other end is rotatably fitted to a plate **5** and **6**, respectively. Circular grooves **14**, **15** are worked into the disk **13**. Pins, not shown, which project out of a rotating disk engage in the grooves **14**, **15** in order to rotate the disk **13**. A motor serving to drive the rotating disk is arranged outside of the container **1** and door **2**. A signal transmitter, also not shown, at the rotating disk for detecting the two end positions ensures reliable operation of the arrangement, since the rest of its component parts are connected with one another.

As is shown in FIGS. **2***a* and **2***b* in conjunction with FIG. **1**, every locking element **7**, **8**, **9** and **10** or the regions of the plates **5** and **6** in which the locking elements **7**, **8**, **9** and **10** are provided is connected with the outwardly directed wall **3** of the door **2** by couplers **16**, **17**, **18**, **19**, **20**, **21**, **22** and **23** which are supported in parallelogram construction at the locking element **7**, **8**, **9** and **10**, respectively, and at the wall **3** so as to be rotatable about axes X at right angles to the locking and unlocking direction. For the sake of simplicity, only one of the axes X is shown. Further, cut out portions **24**, **25**, **26**, **27**, **28**, **29**, **30** and **31** which assist in the locking function are provided in the region of the fastenings of the couplers **16**, **17**, **18**, **19**, **20**, **21**, **22** and **23**, at least in the plates **5** and **6**.

Recesses **34** which leave open sufficient space for the movement of the locking elements **7**, **8**, **9** and **10** during the locking and unlocking process are worked into the container walls **32** and **33** in the region of the door **2** which is fitted therein. The locking elements **7**, **8**, **9** and **10** are supported on contact surfaces **35** in the locked state and accordingly in the closed state of the container **1** (FIG. **2***b*).

The container **1** is locked by the described arrangement in the following manner. When the disk **13** is rotated, in that it is driven by the motor via the pins engaging in the grooves **14**, **15**, the displacing elements **11** and **12** which are fastened in such a way that they lie outside the axis are moved outward so that the plates **5** and **6** are accordingly also moved out. However, as will be seen from FIG. **3**, they follow a curved path Y rather than a linear path. As a result of the sufficiently high movement space, the locking elements **7**, **8**, **9** and **10** can penetrate without hindrance into the recesses **34** until contacting the contact surfaces **35**. The locking elements **7**, **8**, **9** and **10** are pressed against the contact surfaces **35** under tension and subsequently fixed by means of a slight residual rotating movement of the disk **13** beyond the dead center of the displacing elements **11** and **12**. Just as in the case of the penetrating movement until contact is made, there is also essentially no frictional action involved in this contact pressure accompanied by tension.

A seal can, of course, be provided between the container **1** and the door **2** for the purpose of a tightly fitting connection. It is also advantageous when the contact surfaces **35** project beyond the wall **3** slightly when the door **2** is inserted. Unlocking is effected in the reverse sequence, wherein the locking elements **7**, **8**, **9** and **10** are also fixed in the unlocked end position.

The cut off portion of the arrangement which is designed identically in a mirror-inverted manner is dispensed with in the construction according to FIG. **4**. A door **37** which likewise contains the locking and unlocking arrangement between walls is fitted in a container **36**. Two plates **38**, **39** which are arranged adjacent to one another and which lie parallel to the walls of the door **37** have, at their outwardly directed sides, locking elements **40**, **41** in the form of projections. A shared drive acting in the locking and unlocking direction for displacing elements **42**, **43** in the form of connecting rods is provided for displacing the plates **38**, **39** relative to one another and to fix them in the end positions.

Of the shared drive, only a rotatable disk **44** is shown. The displacing elements **42** and **43** are rotatably fitted by one end in each instance to the disk **44** so as to lie outside the axis. They are fastened by their other end to a plate **38** and **39**, respectively. Circular grooves **45**, **46** are worked into the disk **44**. Pins, not shown, which project out of a rotating disk engage in the grooves **45**, **46** in order to rotate the disk **44**. A motor serving to drive the rotating disk is arranged outside of the container **36** and door **37**. A signal transmitter, also not shown, at the rotating disk serves to detect the two end positions.

In contrast to the first embodiment according to FIG **1** and for reasons of stability, each locking element **40**, **41** and each of the plates **38**, **39** is provided with a pair of couplers **47**, **48**, **49**, **50** in parallelogram construction for connecting with the outwardly directed wall of the door **37**. In other respects, the couplers **47**, **48**, **49**, **50** and their fastening are identical to the first embodiment. This also applies to the cut out portions which are incorporated at least in the plates **38**, **39** and which assist in locking. Only one cut out portion, designated by **51**, is shown.

Recesses **52** with corresponding contact surfaces and sufficient space for the movement of the locking elements **40**, **41** are worked into the walls of the container **36** in the region of the inserted door **37**.

Of course, it is possible to select a drive other than that described in this construction for producing the inward and outward movement, or to design the couplers of the locking elements differently, or to modify the quantity of coupled locking elements.

While the foregoing description and drawings represent the preferred embodiments of the present invention, it will be obvious to those skilled in the art that various changes and modifications may be made therein without departing from the true spirit and scope of the present invention.

What is claimed is:

1. An arrangement including in combination,

a container for transporting wafer-shaped objects having container walls;

a container door fitted in said container and comprising two walls, spaced apart from and parallel to each other;

recesses worked into the container walls in the region of said container door which is fitted therein;

means for locking and unlocking said container door comprising locking elements provided within said container door between said two parallel walls and being displaceable into a moved-in end position and into a moved-out end position and, when moving out, penetrate into said recesses within the container walls,

every locking element being in the form of a projection from a plate which is directed parallel to the outwardly directed wall of said container door, wherein all plates share a common drive in form of a rotatable disk driven by a motor and acting in the locking and unlocking direction for connecting rods provided for displacing the plates, the plates being fixed in the moved-in end position and in the moved-out end position by said connecting rods;

means for providing that the penetration of the locking elements into said recesses is effected along a curved path as a result of a movement of each locking element into a corresponding recess as well as in a direction normal thereto,

said means for providing a curved path further comprising structure to maintain and move every plate parallel to an outwardly directed wall of said two parallel walls of the container door by means of couplers, said couplers for every plate being parallel to each other and rotatably connected to said plate and also to said outwardly directed wall so that, as a result of the couplers, there is a predetermined distance between every plate and said outwardly directed wall in the moved-in state, which distance decreases during the outward movement until the locking element comes into contact with a contact surface in the recess against which the locking element is pressed under tension in its moved-out end position.

2. The arrangement according to claim 1, wherein the locking elements are adjacent to one another.

3. The arrangement according to claim 2, wherein one end of each connecting rod is rotatably fitted to a plate, the other end being rotatably fitted opposite thereto at a disk so as to lie outside an axis thereof, and wherein the plates are fixed in the moved-out end position by rotating the disk beyond a dead center position.

4. The arrangement according to claim 1, wherein one end of each connecting rod is rotatably fitted to a plate, the other end being rotatably fitted opposite thereto at a disk so as to lie outside an axis thereof, and wherein the plates are fixed in the moved-out end position by rotating the disk beyond a dead center position.

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